

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* YUICHI SHIROTA,  
HISASHI TANAKA,  
HIROSHI NONOYAMA,  
KAZUSHI SHIKATA,  
YUKIO UEMURA,  
HIKARU SUGI AND  
MANABU MIYATA

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Appeal 2006-2078  
Application 09/531,531  
Technology Center 3700

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Decided: January 11, 2007

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Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and  
CHARLES F. WARREN, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

## DECISION ON APPEAL

This is a decision on an appeal which involves claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42.<sup>1</sup>

We AFFIRM.

Independent claims 6 and 40 are representative of the subject matter on appeal and are set forth below:

6. An air conditioner for a vehicle having a passenger compartment, said air conditioner comprising:

a case forming an air passage through which air is blown into the passenger compartment;

a blower for blowing air in said case into the passenger compartment;

a cooling heat exchanger for cooling air blown from said blower, said cooling heat exchanger being disposed approximately horizontally in said case to have a lower space in said case under a bottom surface of said cooling heat exchanger, the bottom surface being slightly inclined relative to a horizontal surface by an inclination angle;

a heating heat exchanger for heating air from said cooling heat exchanger so that the temperature of air to be blown into the passenger compartment is conditioned, said heating heat exchanger being disposed approximately horizontally at an upper side of said cooling heat exchanger; and

a mode switching member for selectively switching flow direction of the conditioned air blown into the passenger compartment, wherein

said cooling heat exchanger includes a plurality of tubes through which refrigerant flows, and a plurality of corrugated fins disposed between adjacent said tubes;

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<sup>1</sup> The claims appendix to the Brief is in error as it does not contain a copy of appealed claim 10. 37 C.F.R. § 41.37(c)(1)(viii).

said blower is offset from said cooling heat exchanger to a side of said cooling heat exchanger;

    said bottom surface of said cooling heat exchanger has a tilted upper end portion and a tilted lower end portion;

    said case has a case portion defining an air introduction port from which air blown by said blower is introduced into said lower space, said air introduction port having a top end and a bottom end in a vertical direction; and

    said top end of said air introduction port is positioned above said tilted lower end portion of said cooling heat exchanger, and said bottom end of said air introduction port is positioned under said tilted upper end portion of said cooling heat exchanger, in the vertical direction.

40. An air conditioner for a vehicle having a passenger compartment, said air conditioner comprising:

    a case forming an air passage through which air is blown into the passenger compartment;

    a blower for blowing air in said case into the passenger compartment;

    a cooling heat exchanger for cooling air blown from said blower, said cooling heat exchanger being disposed in said case to have a lower space in said case under a bottom surface of said cooling heat exchanger; and

    a heating heat exchanger for heating air from said cooling heat exchanger so that the temperature of air to be blown into the passenger compartment is conditioned, said heating heat exchanger being disposed approximately horizontally at an upper side of said cooling heat exchanger, wherein

    said cooling heat exchanger includes a plurality of tubes arranged in a predetermined direction through which refrigerant flows, and a plurality of corrugated fins disposed between adjacent said tubes;

said blower is offset from said cooling heat exchanger to a side of said cooling heat exchanger;

said case has a case portion defining an air introduction port from which air blown by said blower is introduced into said lower space, said introduction port having a top end and a bottom end in a vertical direction;

said cooling heat exchanger is disposed such that air blown by said blower is introduced into said air introduction port and flows in said lower space along a substantial portion of the bottom surface of the cooling heat exchanger for promoting a flow of condensate in the predetermined direction of the plurality of tubes.

The Examiner relies upon the following references as evidence of obviousness:

Bates	US 1,909,144	May 16, 1933
Brandecker	US 2,552,396	May 8, 1951
Gebhardt	US 2,703,223	Mar. 1, 1955
Newton	US 2,728,206	Dec. 27, 1955
Mullin	US 3,000,192	Sep. 19, 1961
Marsteller	US 3,492,833	Feb. 3, 1970
Nagao	US 4,696,340	Sep. 29, 1987
Kawamura (JP '107) <sup>2</sup>	JP 63-17107	Jan. 25, 1988
Matsuda (JP '016) <sup>3</sup>	JP 63-38016	Feb. 18, 1988
Stech	US 4,842,046	Jun. 27, 1989
Nosaka (JP '388) <sup>4</sup>	JP 2-17388	Jan. 22, 1990
Kinko (JP '365) <sup>5</sup>	JP 5-3365	Jan. 27, 1993

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<sup>2</sup> We refer to the translation prepared for the USPTO by Schreiber Translations, Inc. (March 2004).

<sup>3</sup> We refer to the translation prepared for the USPTO by Ralph McElroy Translation Company (March 2004).

<sup>4</sup> We refer to the translation prepared for the USPTO by Ralph McElroy Translation Company (March 2004).

<sup>5</sup> We refer to the translation prepared for the USPTO by Schreiber Translations, Inc. (March 2004).

Dauvergne (JP '049)<sup>6</sup>      JP 6-156049-A      Jun. 3, 1994  
The rejections before us are:<sup>7</sup>

Claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of JP '365, JP '049 and any of Stech, JP '388, JP '107 or Newton.

Claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the prior art applied to claim 6 above and further in view of Nagao or JP '016.

Claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the prior art applied to claim 6 above and further in view of Gebhardt, Marsteller, Brandecker, Bates or Mullin.

Appellants have grouped appealed claims 6, 7, 9 through 12, 15 through 20, 22 and 23 and appealed claims 40 through 42 as standing or falling together (Br. 4). Thus, we decided this appeal on claims 6 and 40 as representative of the groupings of claims and Appellants' arguments. The remaining dependent claims will, of course, stand or fall with either independent claim 6 or independent claim 40. *See In re Young*, 927 F.2d

<sup>6</sup> We refer to the machine assisted translation provided by the STIC of the USPTO which was prepared by “Thompson/Derwent” (March 15, 2004). A copy of this translation was sent to Appellants in the Office communication mailed April 11, 2006. This machine assisted translation is different from the machine assisted translation provided by the STIC of the USPTO and entered in the USPTO official electronic files on March 8, 2004.

<sup>7</sup> The grounds of rejection are stated in the Final Office action mailed June 13, 2003 (Final Office Action) (Answer 7).

588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); 37 CFR § 1.192(c)(7) (2003); *see also* 37 CFR § 41.37(c)(1)(vii) (September 2004).

We refer to the Brief, Reply Brief and the Answer for a complete discussion of the opposing viewpoints expressed by the Appellants and by the Examiner concerning the above noted rejections.

### OPINION

Having carefully considered each of Appellants' arguments set forth in the Brief, we are not persuaded of reversible error on the part of the Examiner. We sustain the rejections for the reasons set forth in the Answer and below.

### OBVIOUSNESS REJECTION UNDER THE COMBINED TEACHINGS OF JP '365, JP '049 AND ANY ONE OF STECH, JP '388, JP '107 OR NEWTON

A review of the record shows that the Examiner has made alternative rejections under 35 U.S.C. § 103(a) in combining the above-noted references. The alternative rejections presented by the Examiner are:

A. Claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '049 in view of JP '365; and

B. Claims 6, 7, 9 through 12, 15 through 20, 22, 23, and 40 through 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of JP '365 in view of JP '049 and any of Stech, JP '388, JP '107 or Newton.

We address each rejection separately.

A. OBVIOUSNESS REJECTION OVER JP '049 IN VIEW OF JP '365

We first address independent claim 6.

According to the Examiner, JP '049 “shows the essential subject matter of claim 6[,] however it . . . lacks a showing of fins on the evaporator” (final Office action 5). The Examiner indicates that JP '049 also lacks the claim 6 feature wherein the blower is offset from the cooling heat exchanger (*id.*). To supply the second deficiency, the Examiner relies on JP '365’s Figure 5 to show the placement of an air transfer machine 20 (blower) off-set to one side of evaporator 6 (final Office action para. bridging 5 and 6.).

With respect to the first deficiency, the Examiner concludes “that Appellants are well aware of the conventionality in the industry of corrugated fin type evaporators and, that. . . it would have been obvious to have used a corrugated fin type [for the cooling heat exchanger of JP '049]” (Answer 8). In addition, the Examiner concludes that “to have off-set blower 30 of . . . [JP '049] to one side of the evaporator 28 in the manner taught by Figure 5 of . . . [JP '365] to permit a reduction in height of the unit for mounting in smaller vehicle spaces would have been obvious to one of ordinary skill” (final Office action para. bridging 5 and 6).

Appellants argue that JP '049 “fail[s] to disclose the corrugated fin type of heat exchanger” (Br. 12).

The Examiner contends: “Appellants are well aware that corrugated fin type evaporators are an industry standard and the Examiner maintains their inclusion in the claims here is not a reason to find a patentable

invention" (Answer 11). Further, the Examiner states that Appellants were challenged in the final Office action "to produce any evidence that the vast majority of modern automobile evaporators (upwards of 90%) are not corrugated - fin types and, if Appellants could produce nothing, rightfully establish[ ] this as a fact in this prosecution" (Answer para. bridging 8 and 9). According to the Examiner, "Appellants produced no evidence whatsoever to contradict the Examiner's statement" (Answer 9; original emphasis deleted).

We note that Appellants argue that JP '049 "fail[s] to disclose the corrugated fin type of heat exchanger" (Br. 12) but have not contested with any specificity the Examiner's finding that corrugated fin type evaporators are conventional in the industry. We also note that the Examiner's finding is supported by Appellants' disclosure on pages 38 and 55 that "[t]he evaporator 21 is of a known laminated type." Therefore, on this record, there is an undisputed finding by the Examiner that it was well known to use corrugated fin type evaporators in the automotive industry. We accept this undisputed finding as accurate. Because this finding supports a *prima facie* case of obviousness, we agree with the Examiner's conclusion that "it would have been obvious to have used a corrugated fin type" evaporator in the device of JP '049 (Answer 8).

Appellants have not specifically contested the Examiner's conclusion that "to have off-set blower 30 of . . . [JP '049] to one side of the evaporator 28 in the manner taught by Figure 5 of . . . [JP '365] to permit a reduction in height of the unit for mounting in smaller vehicle spaces would have been obvious to one of ordinary skill" (Final Office action, para. bridging 5 and

6). Thus, we agree with the Examiner's conclusion of obviousness for the reasons expressed by the Examiner, particularly since this conclusion has not been challenged by Appellants.

Appellants additionally argue on page 12 of the Brief that JP '049 "fail[s] to disclose . . . the detailed positioning of the top and bottom end of the air introduction port in relation to the cooling heat exchanger." The specific claim 6 limitation requires the "top end of . . . [the] air introduction port . . . positioned above . . . [the] tilted lower end portion of . . . [the] cooling heat exchanger, and . . . [the] bottom end of . . . [the] air introduction port . . . positioned under . . . [the] tilted upper end portion of . . . [the] cooling heat exchanger, in the vertical direction." According to Appellants, the Examiner's interpretation of JP '049 "eliminate[s] the limitation in the claim that the case defines a lower space in the case under a bottom surface of the cooling heat exchanger and the limitation that the air is blown through the air introduction port in the lower space" (Br. 8).

In response, the Examiner contends:

[T]he entire fan and housing including walls 23 and 24 is [sic, are] part of the claimed case forming an air passage through which air is blown into the passenger compartment along with the casing elements above evaporator 28. . . . The claimed "lower space" is clearly shown between blower 30 and the bottom of evaporator 28, notwithstanding Appellants' remarks to the contrary. The top end of the air introduction port, as labelled [sic, labeled] by the Examiner on page 5 of the final rejection (Paper No.19), is clearly above (at a higher elevation as Appellant uses the term) . . . the lowest point of the evaporator 28. The bottom end of the air introduction port is

clearly positioned below (at a lower elevation, as Appellant uses the term) the top end of the air introduction port. [Answer para. bridging 11 and 12; emphasis original.]

In reply, Appellants argue that “[t]he air introduction ports defined by the Examiner on Page 5 of the Final Office Action eliminate any lower space between the blower and the evaporator and thus, the Examiner's position is clearly without merit” (Reply Br. 5).

We note that Figure 1 of JP '049 clearly shows a lower space under the bottom surface of the evaporator. Thus, we agree with the Examiner's contention that “[t]he claimed 'lower space' is clearly shown between blower 30 and the bottom of evaporator 28” in JP '049 (Answer 11) and are unpersuaded by Appellants' argument that the Examiner's position is without merit.

We also note that Appellants have not explicitly argued that the lower space would be eliminated by the Examiner's proposed combination of JP '049 and JP '365 (final Office action para. bridging 5 and 6). Hence, we continue to agree with the Examiner's obviousness conclusion on this issue for the reasons set forth above.

Accordingly, we sustain the Examiner's rejection of independent claim 6 under 35 U.S.C. § 103(a) as being unpatentable over JP '049 in view of JP '365 for reasons set forth above and by the Examiner.

Claims 7, 9 through 12, 15 through 20, 22, and 23 have not been argued separately and are all ultimately dependent from claim 6. Thus, these claims stand or fall with claim 6. Accordingly, we also sustain the

obviousness rejection of claims 7, 9 through 12, 15 through 20, 22, and 23 for the reasons given above.

We note that Appellants present arguments with respect to independent claim 40, directed to the corrugated fin type evaporator (Br. 6), and with respect to dependent claim 42, directed to the relative position of the air introduction port and the evaporator (Br. 8). These arguments have been addressed in our discussion of independent claim 6, and we are unconvinced by these arguments for reasons given above.

Appellants additionally argue that “the Examiner did not present any discussion regarding the limitation of Claim 40 which states that the air blown by the blower flows along a substantial portion of the bottom surface of the cooling heat exchanger” (*id.*).

The Examiner responds that “[JP '049] show[s] the entire bottom of the evaporator ( . . . 28, . . . ) open to flow from the fan. The flow of air is therefore necessarily along the entirety of the bottom surface of the evaporator in each reference” (Answer 11; original emphasis deleted).

Appellants have not contested the Examiner’s response in the Reply Brief. Thus, it appears that the Examiner’s response has convinced the Appellants that the limitation in question does not distinguish over JP '049. In any event, we agree with the Examiner on this matter.

We note that Appellants also argue that “the Examiner has not applied any of the references to the limitations of [claim 40] other than to include this claim in the general rejection” (Br. 13).

In response, the Examiner contends that “[a]ll of the arguments with respect to claim 6 apply to claim 40 and Appellants haven’t stated any

reason, apart from those presented for claim 6, that claim 40 is not met by the 35 U.S.C. 103 rejections" (Answer 15; original emphasis deleted).

Appellants reply that "Claim 40 does differ from Claim 6 and the Examiner has never discussed the elements of Claim 40 that are the same as Claim 6 and clearly has not discussed the elements that are different" (Reply Br. 6).

With respect to claim 40, Appellants have specifically argued the issue of the evaporator type (Br. 12) and the issue "that the air blown . . . flows along a substantial portion of the bottom surface of the [evaporator]" (Br. 8). The Examiner has addressed these claim 40 limitations on pages 8-9 and 11-12 of the Answer. As noted by the Examiner, Appellants have not "stated any reason, apart from those presented for claim 6, that claim 40 is not met by the 35 U.S.C. 103 rejections" (Answer 15; original emphasis deleted).

Thus, we are unpersuaded by Appellants' argument that "the Examiner has not applied any of the references to the limitations of . . . [claim 40]" (Br. 13) and agree with the Examiner on this issue for reasons set forth above and by the Examiner.

Accordingly, we sustain the Examiner's rejection of claims 40, 41 (which depends from claim 40 and which was not separately argued), and 42 under 35 U.S.C. § 103(a) as being unpatentable over JP '049 in view of JP '365 for reasons set forth above and by the Examiner.

B. OBVIOUSNESS REJECTION OVER JP '365 IN VIEW OF JP '049 AND ANY ONE OF STECH, JP '388, JP '107 OR NEWTON

The Examiner contends that JP '365 “shows the essential subject matter of claim 6 with the exception of the details of the fins on the evaporator” (Final Office action 3), and the mode switching members (*id.*). The Examiner also states that JP '365 shows “the top of the fan discharge (23) . . . to be slightly below the bottom of the lowest point an [sic, of] evaporator (6) when a horizontal line is drawn across the reference” (*id.*). That is, JP '365 does not meet the claim 6 limitation of “the top end of . . . [the] air introduction port is positioned above . . . [the] tilted lower end portion of . . . [the] cooling heat exchanger.”

The Examiner relies on JP '049 to “show mode control doors 52, 56 and 62” (final Office action 5). According to the Examiner, JP '049 “appears to show the top end and bottom end of the air introduction port to be positioned as claimed” (*id.*).

The Examiner also contends that the “orientation of fan to evaporator is fairly taught by any one of Stech, JP'388 (Fig. 4) or . . . [JP '107] or Newton” (final Office action 6). Specifically, the Examiner relies on JP '107 as representative of these references (*id.*).

JP '107 shows “an evaporator 14 connected to downward flow side (the air blowing out part 13a side) of the . . . blower 13” (Translation 7). On page 7 of the final Office action, the Examiner illustrates the modification resulting in the “orientation of fan to evaporator” from the combination JP '107 with JP '365.

The record reflects that the Examiner's conclusion of obviousness with respect to the "details of the fins on the evaporator" (Final Office action 3) in this rejection corresponds to the position discussed above with respect to JP '049. The Examiner also concludes that "[t]o have replaced elements 13 of . . . [JP '365] with the mode control doors of . . . [JP '049] to distribute air to vent, foot and defrost outlets to improve occupant comfort would have been obvious to one of ordinary skill" (final Office action 5). In addition, the Examiner concludes:

To have moved the evaporator 6 of . . . [JP '365] downward towards the bottom of the fan plenum so that the lowest point on the evaporator was below the highest point on the fan discharge aperture (23) to advantageously reduce the overall height of the unit to permit it to fit in smaller vehicles (with less vertical space) would have been obvious. This orientation of fan to evaporator is fairly taught by any one of Stech, JP'388 (Fig. 4)[,] . . . [JP '107] or Newton. [Final Office action 6.]

We first note that Appellants also argue that JP '365 "fail[s] to disclose the corrugated fin type of heat exchanger" (Br. 12). This argument is the same one advanced with respect to JP '049. We have already considered this argument and are unconvinced by it for reasons discussed above.

Appellants further argue that JP '365 "does not disclose the mode switching member defined in Claim 6" (Br. 6) and that the Examiner "has not explained the motivation to combine . . . [JP '049] with . . . [JP '365]" (*id.*).

The Examiner responds that the final Office action “clearly state[s] the motivation, to wit: ‘To have replaced elements 13 of . . . [JP '365] with the mode control doors of . . . [JP '049] to distribute air to vent, foot and defrost outlets to improve occupant comfort would have been obvious to one of ordinary skill’” (Answer 10; original emphasis deleted).

With respect to this motivation, Appellants reply that JP '365 “does not appear . . . [to be] an automotive air conditioner for a vehicle and thus there is no motivation to provide vent, foot and defrost outlets” (Reply Br. 5).

We disagree with Appellants’ arguments.

Appellants’ argument concerning the claim 6 limitation of a “mode switching member for selectively switching flow direction of the conditioned air blown into the passenger compartment” does not specifically refute the Examiner’s above noted motivation for his conclusion of obviousness. The Examiner is relying on JP '049 to provide the teaching for the mode switching members and concludes that the combination of JP '049 with JP '365 meets the claimed mode switching member.

With respect to Appellants’ argument that JP '365 is not an automotive air conditioner, we note that JP '365 states on page 3 that it “pertains to a cavity device used in vehicles.” The paragraph bridging pages 9 and 10 of JP '365 also states that “[t]he cool air is blown out to the upper part of the interior of the car from the air flow outlet 13.” Contrary to Appellants’ argument, JP '365 is directed to an automotive air conditioner for a vehicle.

Thus, we are unpersuaded by Appellants' argument that the Examiner has not explained the motivation to combine JP '049 with JP '365, and we agree with the Examiner's obviousness conclusion on this issue for the reasons set forth above and by the Examiner.

On page 6 of the Brief, Appellants additionally argue that JP '365 does not meet the claim 6 limitation of the "top end of . . . [the] air introduction port . . . positioned above . . . [the] tilted lower end of . . . [the] cooling heat exchanger."

As noted above, the Examiner relies on "any one of Stech, JP '388 (Fig. 4) or . . . [JP '107] or Newton" to fairly teach the "orientation of fan to evaporator" (final Office action 6). Using JP '107 as representative of these references, the Examiner illustrates how the combination of JP '107 with JP '365 meets this claim 6 limitation (final Office action 7) by "mov[ing] the evaporator 6 of . . . [JP '365] downward . . . so that the lowest point on the evaporator was below the highest point on the fan discharge aperture (23) to advantageously reduce the overall height of the unit" (final Office action 6). The Examiner states that the "motivation [provided] is based on practical first hand knowledge of automobiles and vans, which is submitted to be universally understood by those of ordinary skill in the art" and that "[c]learly motivation exists to reduce the vertical height of air conditioning/heater units to fit smaller vehicles" (Answer 13).

Regarding the Examiner's proffered motivation for the proposed combination of reference teachings, Appellants argue that "[JP '107] is not interested in reducing the height of the unit since the unit sits on the floor of

the car and blows air out from just under the windows as shown in Figure 1” (Br. 9).

Appellants reiterate their position with respect to the above noted claim 6 limitation on pages 4-5 of the Reply Brief. Appellants further reply that their “argument regarding the fact that JP '107 is not interested in reducing the height of the unit has as much support and possibly more than the Examiner's argument for [motivation]” (Reply Br. 6).

Appellants' arguments regarding the Examiner's proffered motivation do not expressly contest, much less identify deficiencies in, the Examiner's proffered motivation “based on practical first hand knowledge of automobiles and vans” (Answer 13). Instead, Appellants' argument focuses on JP '107 individually without considering what the combined teachings of the references would have suggested to those of ordinary skill in the art.

The predecessor to our reviewing court has held that “one cannot show nonobviousness by attacking a reference individually where, as here, the rejections are based on a combination of references.” *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 882 (CCPA 1981). In this regard, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

*Keller*, 642 F.2d at 425, 208 USPQ at 881.

It follows that Appellants' argument is not convincing of error in the Examiner's proposed combination of JP '107 with JP '365.

In addressing the claim 6 limitation that “[the] cooling heat exchanger . . . [be] disposed approximately horizontally in said case,” there are arguments presented by Appellants and the Examiner as to the angle of inclination of the evaporator in JP '107 (Br. 9; Answer 12). These arguments are not germane since the Examiner does not rely on JP '107 to meet this claim limitation (final Office action 6-7). It is the angle of inclination of the evaporator in JP '365 that is relevant.

To address this issue, we must first interpret the above noted claim 6 limitation. The record of this appeal contains no express interpretation of this claim 6 limitation. Thus, to interpret this claim limitation, we look to the specification since it is usually the single best guide to the meaning of disputed claim language. *Phillips v. AWH Corp.*, 415 F.3d at 1315, 1321, 75 USPQ2d at 1327, 1332.

The Specification makes several references to inclination angle of the evaporator. For example, the Specification discloses on page 4 that “the cooling heat exchanger [evaporator] is inclined at an angle of 10 to 30 degrees with respect to a horizontal plane.” This statement is repeated on pages 22 and 38 of the Specification. On page 26 of the Specification, it is stated that “it is imperative that the evaporator 21 . . . [be] inclined at an angle . . . of 10 to 30 degrees.” The basis for these statements is the data illustrated in Figures 7A and 13 that show the effect of the inclination angle in reducing the amount of condensed water left within the evaporator (Specification 26-28). Thus, in view of the disclosure, we find that one of ordinary skill in the art would interpret the claim 6 limitation “[the] cooling heat exchanger [evaporator] . . . [be] disposed approximately horizontally in

“said case” to mean that the evaporator is disposed at an angle of 10 to 30 degrees.

We now focus on the primary reference JP '365. On this appeal record, neither the Examiner nor Appellants identify the claim 6 limitation “approximately horizontal” as a distinction over JP '365. We note that Figure 5 of JP '365 shows the evaporator 6 at an angle of inclination that appears to fall within Appellants’ range of 10 to 30 degrees.

Thus, we are unpersuaded by Appellants’ argument concerning the angle of inclination of the evaporator in JP '107 because it is irrelevant. Additionally, the primary reference JP '365 meets this limitation.

Appellants’ arguments regarding the alternative references of Stech, JP '388 (Fig. 4) and Newton focus on alleged differences between claim 6 and the respective references individually (Br. 10-11). We are unconvinced by these arguments as they do not take into account the Examiner’s line of reasoning in the final Office action and Answer which serves as the basis for combining JP '365 with JP '049 and JP '107 as well as Stech, JP '388 and Newton. *Keller*, 642 F.2d at 425, 208 USPQ at 882.

Thus, we agree with the Examiner’s conclusion of obviousness for the reasons set forth above and by the Examiner.

Accordingly, we sustain the Examiner’s rejection of independent claim 6 under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of JP '365 and JP '049 and any of Stech, JP '388, JP '107 or Newton.

We also sustain the corresponding obviousness rejection of claims 7, 9 through 12, 15 through 20, 22, and 23, which are all ultimately dependent from claim 6 and have not been argued separately, for the same reasons.

Appellants repeat the earlier discussed arguments with respect to claims 40 (corrugated fin type evaporator (Br. 6) and air flow “along the substantial portion of the bottom surface of the cooling heat exchanger” (Br. 7)) and 42 (position of the air introduction port and the evaporator (Br. 6)). We are unconvinced by these arguments for reasons analogous to those discussed above with respect to JP '365 as well as JP '049.

Appellants have also argued that “the Examiner has not applied any of the references to the limitations of [claim 40] other than to include this claim in the general rejection” (Br. 13).

To the extent that this argument pertains to this rejection, we have previously considered the argument and are unpersuaded for reasons presented above.

Accordingly, we sustain the Examiner’s rejection of claims 40, 41 (which depends from claim 40 and was not separately argued), and 42 under 35 U.S.C. § 103(a) as being unpatentable over JP '365 in view of JP '049 and any of Stech, JP '388, JP '107 or Newton.

#### REMAINING REJECTIONS

The Examiner has presented additional rejections of claims 6, 7, 9 through 12, 15 through 20, 22, 23 and 40 through 42 under 35 U.S.C. § 103(a) over (1) the prior art applied to claim 6 and further in view of Nagao or JP '016 and (2) the prior art applied to claim 6 and further in view of Gebhardt, Marsteller, Brandecker, Bates or Mullin.

We sustain these rejections for reasons discussed above. Therefore, a discussion of the additionally applied references is unnecessary.

## CONCLUSION

In summary,

(1) we have affirmed each of the Examiner's alternative rejections of claims 6, 7, 9 through 12, 15 through 20, 22, 23 and 40 through 42 under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of JP '365, JP '049 and any of Stech, JP '388, JP '107 or Newton;

(2) we have affirmed the Examiner's rejections of claims 6, 7, 9 through 12, 15 through 20, 22, 23 and 40 through 42 under 35 U.S.C. § 103(a) as being unpatentable over the prior art applied to claim 6 above and further in view of Nagao or JP '016; and

(3) we have affirmed the Examiner's rejections of claims 6, 7, 9 through 12, 15 through 20, 22, 23 and 40 through 42 under 35 U.S.C. § 103(a) as being unpatentable over the prior art applied to claim 6 above and further in view of Gebhardt, Marsteller, Brandecker, Bates or Mullin.

The decision of the Examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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